

NYCOA Polyamide 851

Polyamide 6

Nycoa (Nylon Corporation of America)

Message:

NYCOA 851 Nylon is a low viscosity Nylon 6 resin used for general-purpose injection molding and compounding. NYCOA 851 is available with custom additive packages; heat stabilizer, flame retardant, UV stabilizer as well as custom colors. Typical molding applications include gears, fasteners, and hardware items.

General Information	
Features	Low viscosity
	General
Uses	Gear
	Composite
	Fasteners
Appearance	Available colors
Forms	Particle
Processing Method	Composite
	Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.13	g/cm ³	ASTM D792
Molding Shrinkage			ASTM D955
Flow	1.2	%	ASTM D955
Transverse flow	1.4	%	ASTM D955
Water Absorption (24 hr)	1.7	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	120		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹	85.0	MPa	ASTM D638
Tensile Elongation ² (Break)	50	%	ASTM D638
Flexural Modulus ³	2600	MPa	ASTM D790
Flexural Strength ⁴	100	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (6.35 mm)	48	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	185	°C	ASTM D648
1.8 MPa, not annealed	68.3	°C	ASTM D648
Melting Temperature	221	°C	DSC

Additional Information

The value listed as Melting Point DSC, was tested in accordance with ASTM D789.

Injection	Nominal Value	Unit
Drying Temperature	71.1 - 82.2	°C
Drying Time	4.0 - 6.0	hr
Rear Temperature	221 - 241	°C
Middle Temperature	235 - 252	°C
Front Temperature	246 - 260	°C
Nozzle Temperature	254 - 266	°C
Processing (Melt) Temp	249 - 266	°C
Mold Temperature	76.7 - 87.8	°C
Injection Rate	Fast	
Back Pressure	0.138 - 0.517	MPa
Cushion	1.59 - 6.35	mm
Screw L/D Ratio	16.0:1.0	
Screw Compression Ratio	3.0:1.0	

NOTE

1. 50 mm/min
2. 50 mm/min
3. 50 mm/min
4. 50 mm/min

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